

# USER'S GUIDE

**Performance Flexibility**

**For**

**GOLFERS**

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## Important – Please Read

Although the flexibility exercises contained in the Performance Flexibility™ for Golfers program are safe and effective for most people, not all stretches or exercises are appropriate for everyone. If you experience any pain or discomfort while performing any of the flexibility exercises, you should consult a licensed health professional for a complete evaluation before continuing with the Performance Flexibility™ program. If you have a history of recurrent injury, or are currently recovering from an existing injury, you should wait until the condition has resolved or seek the opinion of a licensed health care professional prior to beginning the Performance Flexibility™ for Golfers program.



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## **Why Stretch?**

Stretching, especially for the golfer, can provide a number of positive effects such as enhanced performance, increased flexibility and range of motion, decreased aches and stiffness, and reduced risk of injury. Unfortunately, general stretching programs have proven to be of little benefit to the golfer. To be effective, a specifically designed stretching program with the goal of improving your golf swing and reducing injury must include stretches directed at key muscles and movements. The good news is that this is exactly what we have done for you by developing the Performance Flexibility™ for Golfers program.

The key objective of Performance Flexibility™ for Golfers is to enable you to swing more effectively while minimizing wear-and-tear on your body. To promote a more effective swing, proper golf mechanics is important. This does not mean that all golf swings need to be exactly the same. It does mean though, to be effective, there are certain key motions that must occur during each swing. For example: the back leg must be able to remain stable as the trunk and shoulders rotate back during the backswing; the spine must be able to freely rotate in order to produce a full shoulder turn and produce adequate power during the swing; and the shoulders must be able to reach up overhead to get the club all the way back during the backswing and all the way up and through during the follow through. These are but a few examples of some of the movements that are critical to an effective golf swing.

In order for these motions to occur consistently with minimal strain to the body, the muscles and joints must have adequate flexibility. The reality is that most golfers lack the required flexibility at one or more key areas. This in turn interferes with proper golf swing mechanics. Poor flexibility forces your body to move in an altered manner to compensate for the restricted mobility: a situation referred to in golf as a “swing compensation.” Not only will this lead to a weaker, less effective swing, but “swing compensations” also increase the risk of injury.

Many golfers spend countless hours practicing on the driving range but experience discouraging progress because their bodies are unable to move properly to produce an effective golf swing. As a result, much of the power generated never reaches the ball. It is lost due to inefficient movement patterns and “swing compensations.” Serious negative consequences of “swing compensations” are too commonly seen by chiropractors, sports therapists, and

coaches. This is so unfortunate since we know that “swing compensations” are easily corrected by promoting proper muscle flexibility and joint movement. The problem is that without consciously addressing these issues, golfers will continue to perform below their capability.

At Kinetesis Sport Solutions, we simply want to help build better athletes. That is why we developed Performance Flexibility™ for Golfers. The program is based upon a combination of the latest scientific research in the field of stretching and athletic performance, along with our work with golfers helping to rehabilitate their injuries and preparing their bodies for optimal golf performance. We believe that you can not get maximum benefit from Performance Flexibility™ for Golfers until you understand “the why” of our specialized stretching program. So in addition to teaching you the specific stretches, we will also teach you exactly how and when to stretch, and why each stretch in Performance Flexibility™ for Golfers is critical to staying healthy and performing at your best.

## **How to stretch**

It is important to realize that the flexibility and movement capacity of muscles and joints is dependent upon several factors. These include active flexibility, passive tissue stiffness, muscle balance, and the control and regulation of muscle length by the nervous system. Since different types of stretching affect different components of flexibility, a variety of stretching techniques are needed to ensure all aspects of flexibility and movement regulation are addressed. This is why in the Performance Flexibility™ program, we have included 3 different types of stretches to ensure all the components of flexibility are trained. We have separated these 3 different types of stretches into distinct flexibility tracts and have arranged the stretches in a specific order so that each stretch builds on the next.

### **The Active Flexibility Tract**

Performance Flexibility™ for Golfers begins with active stretches which take advantage of the coordinated contraction and relaxation of opposing muscle groups. These stretches involve holding each stretch for just 1-2 seconds, but require multiple repetitions of each stretch. This type of movement helps promote muscle balance at the key joints involved in the golf swing. In addition, these active motions are a great warm-up as they increase blood flow to the working muscles. Active motions not only increase flexibility but also help prepare the muscles and joints for the next stages of the Performance Flexibility™ program.

### **The Passive Flexibility Tract**

The active stretches are followed by the Passive Flexibility Tract which includes stretches designed to isolate the passive flexibility components of the key muscles and joints which are central to the golf swing. These stretches resemble the more traditional types of stretches and require a longer holding time (i.e. 15-30 seconds) than the active flexibility stretches.

## **The Integrated Flexibility Tract**

The final flexibility tract includes full-body integrated stretches. Though we often talk about muscles as if they stretch and contract independently of each other, this is not really how muscles work. In fact, muscles form intricate connections to each other through a specialized form of connective tissue known as fascia. This fascia essentially links different muscles together to form what are referred to as muscle slings. These slings span across several adjacent joints, providing a functional link between different body segments. In many cases, these muscle slings can travel all the way from the feet to the shoulders and arms. Not only is the strength and flexibility of each individual muscle important, but so too is the integrated strength and flexibility of the muscle slings. This final set of stretches incorporates very specific whole body movements designed to promote proper flexibility of the key muscle slings involved in golf.

## When to stretch

The final thing we need to discuss is when to stretch. Many golfers hold to the notion that stretching needs to be done prior to golf or exercise as a part of a warm-up; however, this is not necessarily the case. The first thing that needs to be emphasized is that **stretching is not a warm-up**. In fact, some studies have even suggested that static stretches prior to exercise may be detrimental to performance by altering the neurological control of movement and reducing the force producing capabilities of a muscle. Unfortunately, many golf coaches and instructors have reasoned this to mean that stretching is not important. This is simply not the case. In fact, there are many significant and important benefits to be gained from a well designed stretching program, but to be most effective, the program should not necessarily be done immediately before a round of golf or hitting balls on the range. Instead, we recommend that the Performance Flexibility™ for Golfers program be completed separately from golf. Through our work with golfers, runners, and other athletes, we have found that performing a sport specific stretching program separate from exercise training can be a very effective way to develop and maintain optimal flexibility and movement. To understand why this is, let's back up and look at how the body responds to stretching in the first place. This understanding will clear up one more point of confusion regarding stretching.

Many people believe that stretching will actually lengthen a muscle; however, this is not really accurate. Stretching, generally, does not lengthen the muscle. Instead, it increases your muscles tolerance to stretch. This means that although your muscles do not actually get longer, you can stretch the muscle to a greater degree before you actually feel the stretch. This occurs in large part because the ability of a muscle to stretch is controlled by the nervous system through reflexes. A major part of the physiological effect of stretching is training these reflexes. It is important to realize that to develop and maintain these changes in reflex control and improved flexibility that these neuromuscular processes must be continually trained and challenged. In other words, for a stretching routine to be effective in maintaining optimal movement and therefore optimal movement efficiency, it must be done regularly.



Most golfers we have worked with have found that going through the entire Performance Flexibility™ program each evening (which takes about 10-15 minutes) is one of the best ways to develop and maintain proper movement and flexibility. Using the Golf StretchMat™ makes this easy to do even in your living room as you have the entire program in front of you and a comfortable surface to do your stretches. Of course, the program does not have to be done at night, but we have found that by doing the stretches in the evening it helps golfers to combat a lot of the increased muscle tension that develops through the day, and helps you to wake up looser and more prepared for the next days' activities.

**One of the best times to go through the Performance Flexibility™ for Golfers program is each evening. This will help to decrease tightness and speed recovery, ensuring you wake-up ready for the next days' activities. In addition, completing the program daily will bring the muscles and joints through all of the key movements required to ensure optimal swing technique, helping to promote optimal power, efficiency, and peak performance.**

## **Ensuring Proper Form Is Critical To Success**

To derive maximum benefit from Performance Flexibility™ for Golfers, it is important to keep in mind that the major purpose of stretching is to improve movement efficiency and prevent the need for “swing compensations.” Just as the way the body moves during the golf swing determines the effectiveness of the swing, the effectiveness of the stretch will be determined by how the body moves during the stretching exercises. In fact, if you perform stretches with the incorrect form, it is unrealistic to expect that the stretching program will correct your swing mechanics or improve your movement efficiency. This means that proper form when performing the stretches is important to ensure that the stretch movement is occurring at the right areas.

### **Maintaining Proper Trunk Position**

The most important factor that ensures proper form with Performance Flexibility™ for Golfers is to keep the pelvis and low back stable, and in the correct position during the stretch sequences. Most golfers have a tendency to have excessive motion at the pelvis and spine when stretching. This will cause problems as excessive motion at the spine not only fails to promote flexibility in the areas that need it, but can also create excessive strain to the back and pelvis; thus, instead of correcting faulty movement patterns, using the incorrect form during the stretches can actually facilitate “swing compensations” and inefficient movement patterns!

To ensure proper form, it is important to actively hold the pelvis and spine in the correct position while stretching. This will prevent excessive spine and pelvic motion and help ensure the stretch is occurring at the right areas. To do this, a common practice that can be incorporated into the stretches are Anterior and Posterior Pelvic Tilts.

With pelvic tilts, you can use the hip and trunk muscles to pre-position the spine and pelvis in the correct position. Then while performing the stretch, you can simply hold the position to stabilize the spine and concentrate the stretch at the correct regions. In most cases, you will feel a dramatic difference in the quality and intensity of the stretch when incorporating a pelvic tilt into the stretch sequences. It is worth noting that this practice is also supported

by existing research which shows adding a pelvic tilt to stretching exercises produces a greater increase in flexibility and range of motion, particularly with stretches for the legs and hips.

If you are unfamiliar with performing pelvic tilts, pages 11 through 19 explain what these pelvic tilts are and how to perform both anterior and posterior pelvic tilts.

## **Anterior Pelvic Tilt**

With an anterior pelvic tilt, the top of the pelvis rotates slightly forward while the bottom of the pelvis rotates backward. Since the pelvis and spine are connected, as the pelvis rotates anteriorly, the spine will arch to a greater degree accentuating the curve of the lower back.

To perform an anterior pelvic tilt, use the muscles of your lower back to pull the back of the pelvis upward and gently increase the arch in your lower back. As you do this, you should feel your pelvis rotate clockwise (if viewed from the right side), but you should not feel your upper body lean forward. Keep in mind that this is a small and subtle motion so you will not see or feel a great degree of movement.

## **Posterior Pelvic Tilt**

With a posterior pelvic tilt, the top of the pelvis rotates backward while the bottom of the pelvis rotates forward. A posterior pelvic tilt will also cause the spine to straighten.

To perform a posterior pelvic tilt, use your abdominal muscles to pull the front of your lower pelvic bone up, and the muscles on the back of your hips to thrust your hips forward. It is also helpful to think about flattening the back as you do this. During this motion, your pelvis should rotate counter-clockwise (if viewed from the right side), but you should not feel your upper body lean backward or your knees bend. Once again, this is a small and subtle motion so you will not see or feel a great degree of movement.



Figure 1



Figure 2



Figure 3

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## PELVIC TILT PROGRAM

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*For many golfers, anterior and posterior pelvic tilts will come naturally and can be easily incorporated into their Performance Flexibility™ program. For others, holding the spine and pelvis in the proper position during the stretches will prove more challenging as they are not familiar with these movements. If you are in the latter group, it will be helpful to include some simple exercises in the early stages of the program to teach your body how to better activate the muscles of the trunk and pelvis, and to maintain the proper pelvic position. Go through these exercises prior to performing the Performance Flexibility™ for Golfers program until you can easily perform the Anterior and Posterior Pelvic Tilts during the stretches. Once you have this mastered, there is no need to continue with the isolated pelvic positioning exercises as these motions will be reinforced during the Performance Flexibility™ program.*

**To develop better control of the anterior and posterior Pelvic tilts, perform the following exercise sequence prior to the Performance Flexibility™ program.**

## Quadruped Position

1. Begin on your hands and knees and slowly sag your back towards the mat – this is the anterior pelvic tilt position (**figure 1**).
2. Next, reverse this position and arch your spine toward the ceiling – this is the posterior pelvic tilt position (**figure 2**).
3. Slowly move between these two positions 10-15 times.

*NOTE: While doing this try to concentrate the movement at the lower back by using your hips to initiate the movement. For example, as the back sags toward the floor you should feel your hips stick out behind you – and as your back flexes toward the ceiling, you should feel your hips tuck under your body. Pay attention to how these movements feel as they are the same movements you will use during the stretches.*



**Figure 1:** anterior pelvic tilt position - notice how the spine sags toward the mat



**Figure 2:** posterior pelvic tilt position - notice how the spine arches up toward the ceiling

## **Supine Position**

1. Begin on your back with the knees bent and feet flat on the mat.
2. Slowly arch your back off the mat by contracting the muscles of your lower back. As you do this, you should feel your hips push into the mat and your lower back lift off of the mat. This is the anterior pelvic tilt position (**figure 1**).
3. Next, push your lower back into the mat by contracting your abdominal muscles. This is the posterior pelvic tilt position (**figure 2**).
4. Simply repeat this back and forth motion 10-15 times.



**Figure 1:** *anterior pelvic tilt position - notice how the spine arches away from the mat*



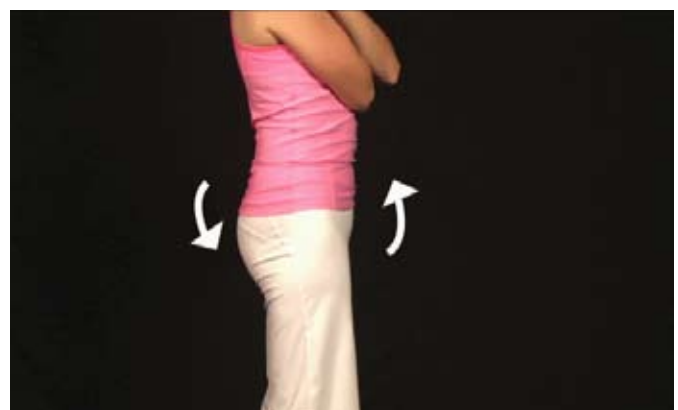
**Figure 2:** *posterior pelvic tilt position - notice how the spine flattens into the mat*

## Standing Position

1. From a standing position, gently contract the muscles of your lower back in an effort to arch your lower back and tilt your pelvis forward in a clockwise direction (if viewed from the right). This is the anterior pelvic tilt position (**figure 1**).
2. Next, perform a posterior pelvic tilt by contracting your abdominal and gluteal muscles in an effort to flatten out your back and bring your hips back underneath your body. This is the posterior pelvic tilt position (**figure 2**).
3. *NOTE: Keep in mind that these pelvic tilts are subtle motions so you should not expect to feel a great deal of movement. If you find your knees have a tendency to bend or your upper body leans backward or forward, this is a sign that you are trying to move too much or in an incorrect manner.*
4. Repeat this back and forth motion 10-15 times.



**Figure 1:** *anterior pelvic tilt position  
- notice how the spine arches and the  
pelvis rotates clockwise*



**Figure 2:** *posterior pelvic tilt position  
- notice how the spine straightens and  
the pelvis rotates counter-clockwise*



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## ACTIVE FLEXIBILITY TRACT

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### **Open Book Reach**

**Hold Time: 1-2 seconds**

**Repetitions: 10**

**Trunk Position: Does Not Apply**

Proper rotation at the hips, spine, and shoulders is critical for an effective golf swing. This first stretch in the Active Flexibility Tract is designed to promote and maintain the needed flexibility in these key areas. Not only will this stretch target the rotational muscles of the hip, trunk, and shoulder, but the active movement component will also help to facilitate mobility in the joints of these regions.

#### **To perform the Open Book Reach:**

1. Begin lying on your right side. Both arms should be fully extended and resting on the floor in front of you at shoulder height. Your right leg should be straight and your left hip and knee should be bent 90 degrees and resting on the mat **(figure 1)**.
2. From this position reach the left arm back, bringing the back of your left hand towards the floor behind you **(figure 2)**.
3. As you reach the left arm back, keep the right arm resting on the floor. Do not allow the left knee to lift off of the mat **(figure 3)**.
4. To promote greater spine motion, turn your head to look at the left hand as you reach back.
5. Hold this stretch position for 1-2 seconds and return to the starting position.
6. Repeat the motion 10 times and then repeat on the opposite side.



**Figure 1:** *start position*



**Figure 2:** *stretch position*



**Figure 3:** *Incorrect form - note how the knee lifts off the mat*

### Windshield Wiper

Hold Time: 1-2 seconds

Repetitions: 10

Trunk Position: Does Not Apply

A proper golf swing requires the lower body to remain stable to provide an adequate base of support for the upper body to swing from. In order for the trunk and shoulders to rotate back during the backswing, and then forward during the follow through, there needs to be adequate rotational flexibility in both the rear and lead hips. The Windshield Wiper stretch is an active stretch designed to promote hip internal and external flexibility, and will affect the hip muscles as well as the hip joints themselves.

### **To perform the Windshield Wiper stretch:**

1. Begin lying on your back with the legs fully extended and your toes pointing towards the ceiling **(figure 1)**.
2. From this position, externally rotate the legs so that the feet are pointing away from each other. Hold this position for 1-2 seconds **(figure 2)**.
3. Next, internally rotate the legs so the feet are pointing toward each other. Hold this position for 1-2 seconds **(figure 3)**
4. *NOTE: Although you are moving the feet in and out, this flexibility exercise is designed to promote rotational mobility at the hips. Therefore, try to concentrate on rotating the entire leg, and initiating this motion using the muscles of the hips.*
5. Repeat this motion 10 times.



**Figure 1:** *starting position*



**Figure 2:** *turn the feet outward by externally rotating the hips*



**Figure 3:** *turn the feet inward by internally rotating the hips*

### **Active Trunk Twist**

**Hold Time: 1-2 seconds**

**Repetitions: 10**

**Trunk Position: Does Not Apply**

Not only is adequate muscle and joint flexibility in the spine important to develop force and power during the golf swing, but excessive tightness in the spine can often lead to low back pain (a common condition among golfers). This next stretch in the Active Flexibility Tract targets the muscles and joints of the spine and is designed to develop rotation flexibility in the muscles and joints of this key region.

### **To perform the Active Trunk Twist:**

1. Begin lying on your back with both knees bent and feet flat on the mat. Your arms should be straight and resting on the floor beside you with the palms facing down (**figure 1**).
2. In a slow and controlled manner, let the knees fall sideways toward the floor (**figure 2**).
3. As you do this, both shoulders should remain flat on the mat. If you cannot bring the knees all the way to the floor move only as far as possible without either shoulder lifting off the mat.
4. Hold this stretch position for 1-2 seconds and then pull the legs toward the mat on the opposite side (**figure 3**).
5. Repeat this back and forth motion 10 times.



**Figure 1:** *starting position*



**Figure 2:** *Let the knees drop to the side towards the mat*



**Figure 3:** *Bring the knees towards the opposite side*

### **Active Overhead Reach**

**Hold Time: 1-2 seconds**

**Repetitions: 10**

**Trunk Position: Posterior Pelvic Tilt**

Flexibility of the shoulders is essential to having a full backswing, and to properly swinging the club up and around the body during the follow through. Tightness in the shoulders restricts proper shoulder motion during the backswing and follow through. This will not only result in a loss of power during the swing, but will also force other body regions to compensate for the shoulder restriction. The Active Overhead Reach stretch targets shoulder flexibility (particularly the Latissimus Dorsi muscle).

### **To perform the Active Overhead Reach:**

1. Begin lying on your back with your knees bent and feet flat on the mat. With your elbows straight and hands together, rest your arms on top of your body (**figure 1**).
2. Keeping your elbows straight and hands together, raise your arms up overhead until you feel a stretch in your shoulders and upper back (**figure 2**).
3. To maintain proper form, do not allow your lower back to arch up off the mat as you raise the arms overhead (**figure 3**). To prevent this from happening, perform a posterior pelvic tilt and hold this pelvic position for the entire stretch.
4. Hold this stretch position for 1-2 seconds and then return to the starting position.
5. Repeat the overhead reaching motion 10 times.





**Figure 1:** *starting position*



**Figure 2:** *Stretch position*



**Figure 3:** *Incorrect form - note how the lower back arches up off the mat*

### Floor Angel

Hold Time: 1-2 seconds

Repetitions: 10

Trunk Position: Posterior Pelvic Tilt

As previously stated, proper shoulder mobility is critical for an effective golf swing. The Floor Angel stretch will help promote proper flexibility in the shoulder region. In particular, this stretch will target the chest, shoulder blades, and rotational muscles of the shoulder such as the rotator cuff muscle group. Adequate rotation is especially important at the rear shoulder during the backswing, and in the lead shoulder during the follow through.

### **To perform the Floor Angel:**

1. Begin on your back with your knees bent and feet flat on the mat. Position your arms on the floor beside you with the elbows bent and palms facing the ceiling (**figure 1**).
2. From this position, slide the arms up overhead until you feel a stretch in the chest, shoulders, or upper back. Hold the stretch for 1-2 seconds (**figure 2**).
3. *NOTE: To ensure proper form throughout this movement, only move the arms up and down as far as possible without allowing the lower back to arch (**figure 3**), or the elbows or hands to lose contact with the mat. To ensure proper form, it is helpful to push the lower back into the mat by performing a posterior pelvic tilt, and holding this position throughout the entire movement.*
4. Pull the arms back down and bring the elbows back toward the side of the rib cage while squeezing the shoulder blades together at the bottom of this motion (**figure 4**).
5. Repeat this motion 10 times.



**Figure 1:** *starting position*



**Figure 2:** *stretch position - arms overhead*



**Figure 3:** *incorrect form - note how the back is arching up off the mat*



**Figure 4:** *squeeze the shoulder blades together as you pull the elbows in towards the body*

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## PASSIVE FLEXIBILITY TRACT

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#### **Figure 4 Stretch**

**Hold Time: 15-30 seconds**

**Repetitions: 1**

**Trunk Position: Anterior Pelvic Tilt**

The first stretch in the Passive Flexibility Tract is the figure 4 stretch which targets the deep external rotator muscles on the back of the hip. Similar to the Open Book Reach and Windshield Wiper stretches, the Figure 4 stretch will help to promote proper flexibility in the hips. The major difference is that the Figure 4 stretch specifically targets the deep rotational muscles of hip such as the Piriformis muscle. In addition, since the passive stretches involve longer holding times, they target different components of the muscles than the active stretches.

#### **To perform the Figure 4 stretch:**

1. Begin lying on your back with knees bent and feet flat on the mat. Cross the left leg over the right, resting the left ankle on the right knee **(figure 1)**.
2. Keeping the left leg relaxed, lift the right knee toward your chest until you feel a light pull in the back of the left hip and upper thigh. This stretch is easier if you use your arms to help pull the thigh towards your chest **(figure 2)**.
3. *NOTE: If you find it difficult to reach the leg with your hands, use a towel or yoga strap to assist you until your flexibility improves (figure 3).*
4. Hold this stretch position for 15-30 seconds then repeat on the opposite side.
5. *NOTE: If you find that your lower back has a tendency to push into the mat as you pull the thigh towards your chest, this is an indication that motion is occurring at the lower back instead of the hip. To prevent this, arch your lower back away from the mat by performing an anterior pelvic tilt. This will help concentrate the stretch at the hip and protect the back from excessive movement.*



**Figure 1:** *starting position - cross 1 leg over the other*



**Figure 2:** *stretch position - pull the thigh towards your chest*



**Figure 3:** *use a towel or yoga strap to assist you if you cannot reach the leg comfortably*

### **Counter-Rotation Stretch**

**Hold Time: 15-30 seconds**

**Repetitions: 1**

**Trunk Position: Does Not Apply**

Proper mobility at the hips and shoulders is important for an effective swing. It is important to realize that the motions of the upper and lower body occur in opposite directions to one another. These opposing motions create the rotational movement of the spine that is so important to the golf swing. Since one of the key goals of Performance Flexibility™ for Golfers is to promote optimal movement, it is important that we incorporate these movements into the stretching program. The Counter-Rotation stretch does this by stretching the hips and shoulders in opposing directions, just as these motions occur during the golf swing.

### **To perform the Counter-Rotation stretch:**

1. Begin lying on your back with the knees bent and feet flat on the mat. From this position cross the left leg over the right, resting the left ankle on the right knee **(figure 1)**.
2. Keeping the right foot in contact with the mat, let the right knee drop inward towards the mat. To increase the stretch on the right hip you can use the left leg to pull the right knee further in toward the mat **(figure 2)**.
3. While maintaining this stretch reach your left arm across your chest **(figure 3)**.
4. Keeping the elbow straight let the left arm fall toward the floor by your right side. This will create a counter-rotation movement between the hips and shoulders.
5. To increase the stretch on the left shoulder, pull down on your left wrist with your right hand while keeping your elbow straight **(figure 4)**.
6. Hold this stretch for 15-30 seconds and then repeat on the opposite side.



**Figure 1:** *cross the left ankle over the right knee*



**Figure 2:** *bring the right knee to the left*



**Figure 3:** *Reach the left arm to the right*



**Figure 4:** *pull the left arm down with the right arm*



### **Seated Trunk Twist**

**Hold Time: 15-30 seconds**

**Repetitions: 1**

**Trunk Position: Does Not Apply**

The next stretch in the Passive Flexibility Tract is the Seated Trunk Twist. As with the Open Book Reach and Active Trunk Twist stretches, the Seated Trunk Twist stretch is designed to promote rotational mobility in the spine and surrounding muscles. Although these stretches target similar areas, keep in mind that there are different components of the muscles and tendons related to flexibility. To target each different component different types of stretches are required. The Seated Trunk Twist targets the more passive component of the rotational muscles of the spine, including the Erector Spinae muscles, Multifidi muscles, as well as many of the joints and ligaments surrounding the spine.

#### **To perform the Seated Trunk Twist:**

1. Begin in a seated position with the left leg fully extended and the right leg bent with the right foot positioned flat on the mat on the outside of the left leg (**figure 1**).
2. From this position, reach your left arm forward so it is resting against the outside of the right knee and place your right hand on the floor behind you (**figure 2**).
3. Next, turn your upper body to the right as if you are trying to look behind. As you do this, you should feel a stretch in the back and right hip.
4. To increase the stretch, gently push against the right knee with your left arm to further rotate the trunk (**figure 3**).
5. Hold this stretch for 15-30 seconds and then repeat on the opposite side.



**Figure 1:** *Start position*



**Figure 2:** *Place the left elbow on your right knee and your right arm behind your body*



**Figure 3:** *Turn your trunk to the right*

### **Hurdler's Stretch**

**Hold Time: 15-30 seconds**

**Repetitions: 1**

**Trunk Position: Anterior Pelvic Tilt**

The Hurdler's stretch targets the hamstring muscles located on the back of the thigh. The hamstrings are often forgotten muscles in golf, but this muscle group plays an important role in the golf swing. For example, the hamstrings are very active in stabilizing the lower body and supporting the forward lean of the trunk during all phases of the swing. As a result of the high demand on the hamstrings they have a tendency to become tight which will interfere with a proper swing. Keeping these muscles loose and flexible should not be overlooked.

### **To perform the Hurdler's Stretch:**

1. Begin in a seated position with the left leg extended out in front of you and the sole of your right foot resting against the inside of your left knee **(figure 1)**.
2. From this position, lean your trunk forward until you feel a stretch in the back of the thigh **(figure 2)**.
3. *NOTE: It is important to keep the trunk tall and upright when leaning the upper body forward to concentrate the stretch at the hamstring group. To do this, perform an anterior pelvic tilt and hold this position throughout the stretch.*
4. Hold this stretch for 15-30 seconds, then repeat on the opposite side.



**Figure 1:** *starting position*



**Figure 2:** *stretch position - note how the back remains straight*

### **Kneeling Lunge**

**Hold Time: 15-30 seconds**

**Repetitions: 1**

**Trunk Position: Posterior Pelvic Tilt**

The final stretch in the Passive Flexibility Tract is the Kneeling Lunge stretch. This stretch targets the hip flexor muscle group, particularly the Iliopsoas muscle located deep on the front of the thigh. Tightness of this muscle not only restricts proper hip extension, but will also restrict rotation of the hip because of how the muscle attaches to the upper leg. Since this muscle originates on the lower spine, to fully stretch this muscle, it is important to not only to stretch to promote hip extension, but also to include a lateral trunk lean in the stretching motion. This will ensure the muscle is fully stretched from both ends of its origin and insertion.

### **To perform the Kneeling Lunge stretch:**

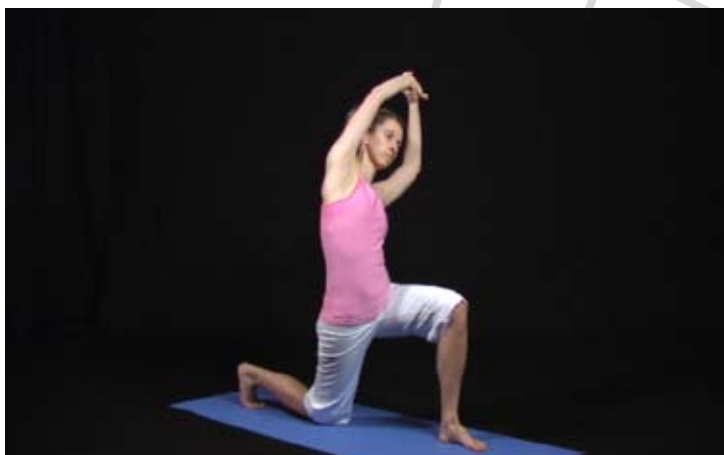
1. Begin in a kneeling position with the right knee on the mat and the left foot positioned in front of you (**figure 1**).
2. Perform a posterior pelvic tilt to ensure proper form. Hold this posterior pelvic tilt for the entire stretch.
3. Slide your upper body forward by bending your left knee and pushing forward with your right hip (**figure 2**).
4. *NOTE: As you do this, you should feel a stretch on the front of the right hip and thigh. It is important that you do not allow the lower back to arch or the upper body to lean forward during this movement. Either of these positions will be less effective in stretching the hip flexors and promoting optimal motion at the hip during the swing.*
5. While maintaining the stretch in the hip, reach the right arm up overhead and grasp the right wrist with the left hand.
6. From this position, lean the upper body to the left while gently pulling the right arm with the left hand up and over to increase the stretch (**figure 3**).
7. Hold this stretch position for 15-30 seconds and then repeat on the opposite side.



**Figure 1:** *start position*



**Figure 2:** *stretch position*



**Figure 3:** *Reach your right arm overhead and lean your upper body to the left*

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## INTEGRATED FLEXIBILITY TRACT

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## **Lateral Sling Stretch**

**Hold Time: 15-30 seconds**

**Repetitions: 1**

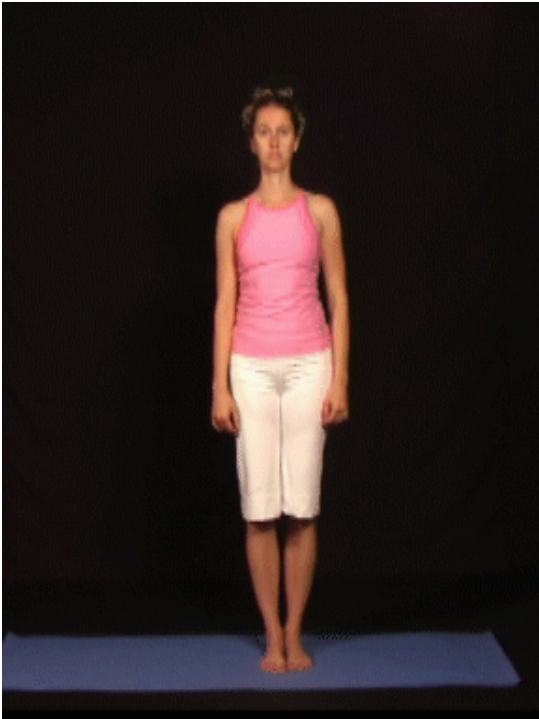
**Trunk Position: Posterior Pelvic Tilt**

The Integrated Stretch Tract begins with the Lateral Sling stretch. This sling essentially runs along the entire lateral aspect of the body. The lower portion of this sling begins with the Peroneal muscle group located on the outside of the lower leg, and continues up to make a connection at the outer portion of the knee with the Iliotibial band (IT Band). The IT Band is a thick, strong, fascial band that runs from the outside of the knee up to the hip. As the IT Band runs up into the hip, it makes a connection with the muscles on the outside of the hip, including the Gluteus Maximus and Tensor Fascia Latae (TFL). From here, the sling continues as the muscles of the hip connect with the muscles on the side of the trunk and eventually the shoulder. Proper flexibility in this sling is important during the downswing and especially the follow through.

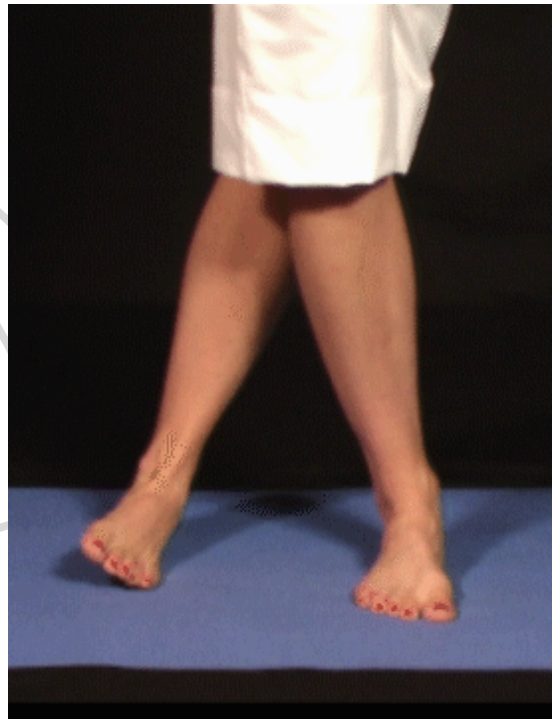
### **To perform the Lateral Sling stretch:**

1. Begin in a standing position and cross your left foot behind your right leg (**figure 1**).
2. *NOTE: By keeping the foot on an angle so only the outside of your left foot is in contact with the mat, it will act to place a stretch on the Peroneal muscle group as the full stretch is executed (**figure 2**). If you find this difficult, you may need to keep your foot flat on the mat until you become more familiar with the stretch and your balance improves enough to maintain the proper foot alignment.*
3. From this position, raise your left arm up overhead and grasp your left wrist with your right hand (**figure 3**).
4. Slide your hips to the left while leaning your upper body to the right (**figure 4**).
5. To place a deeper stretch on the muscles of the shoulder, particularly the Latissimus Dorsi group, gently pull the left arm with the right hand until you feel the stretch increase on the outer aspect of your left shoulder.
6. Hold the stretch for 15-30 seconds and repeat on the opposite side.





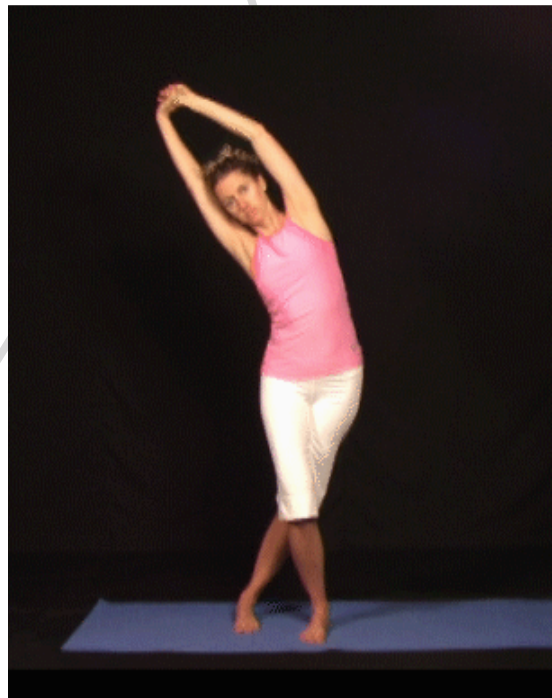
**Figure 1:** starting position



**Figure 2:** *cross the left foot behind the right leg*



**Figure 3:** *raise your left arm up and grasp the wrist with your opposite hand*



**Figure 4:** *slide your hips to the left and lean your upper body to the right*

### **Anterior Oblique Sling**

**Hold Time: 15-30 seconds**

**Repetitions: 1**

**Trunk Position: Posterior Pelvic Tilt**

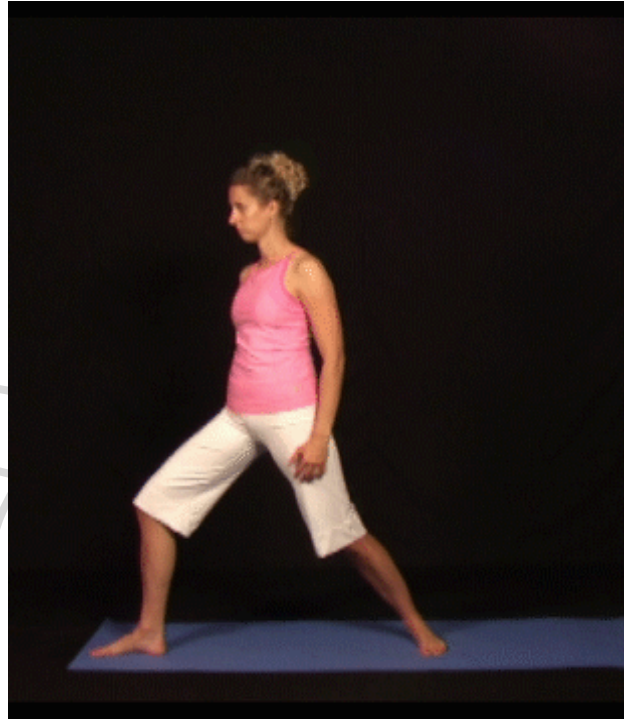
The next stretch in the Integrated Flexibility Tract targets the Anterior Oblique Sling. This sling runs diagonally across the front of the body, providing a connection between the upper body and lower body. The anterior oblique sling includes the adductor muscle group located on one side of the body and the abdominal oblique and chest muscles located on the opposite side of the body. As a result of the diagonal orientation of this muscle sling, it is ideally suited for rotational activities such as the golf swing. Restriction in this sling will restrict the degree of rotation available from the entire body, which will have a tremendous impact on both the backswing and follow through phases of the swing.

### **To perform the Anterior Oblique Sling stretch:**

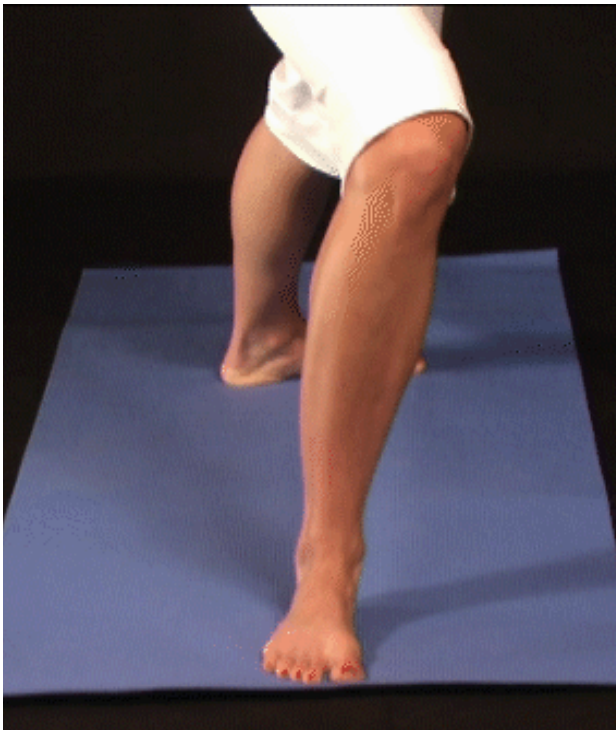
1. Begin in a standing position with your left foot facing straight ahead and your right foot turned out 90 degrees.
2. Next, Take a wide step to the right (**figure 1**).
3. From this position, rotate your hips toward the right leg and perform a posterior pelvic tilt.
4. *NOTE: This rotation and posterior pelvic tilt are subtle movements, but when done properly you should feel a light stretch in the left hip.*
5. Holding this pelvic position, bend your right knee and slide your trunk forward toward your right foot. As you do this, you should feel the stretch increase in the left hip and groin (**figure 2**).
6. *NOTE: To ensure this stretch is effective, make sure that your knee is positioned directly over the foot as you slide your upper body toward your right foot. Do not allow the knee to roll to the inside of the foot (**figure 3**), and do not allow the knee to progress beyond the toes. If you are having difficulty with this stretch, it is an indication that you need to step out further with your right foot, or you have not positioned the pelvis properly.*
7. From this position, reach your left arm across your body and pull back on the left wrist with the back of your right hand. This will increase the stretch in the upper portion of the sling (**figure 4**).
8. Hold this stretch for 15-30 seconds and then repeat on the opposite side.



**Figure 1.** Take a wide step to the right.



**Figure 2.** Bend your right knee and shift your trunk to the right to stretch your left hip.



**Figure 3:** *incorrect form - note how the knee does not line up with the foot*



**Figure 4:** *Reach your left arm across your body and pull your left wrist with your right hand*

### **Lateral Oblique Sling**

**Hold Time: 15-30 seconds**

**Repetitions: 1**

**Trunk Position: Posterior Pelvic Tilt**

The Lateral Oblique Sling includes the adductor muscle group on the inside of the thigh, and the lateral trunk muscles located on the opposite side of the body. This sling is very important for controlling side-to-side motions of the body, including the degree of side-bending flexibility of the spine and the right to left sliding of the hips during the golf swing. Excessive tightness in this sling will restrict the required movements of the spine and hips and interfere with an optimal swing.

### **To perform the Lateral Oblique Sling stretch:**

1. Begin in a standing position with both feet pointing forward (**figure 1**).
2. Step out sideways with your right foot. You will need to take a big step for the stretch to be effective (**figure 2**).
3. From this position, perform a posterior pelvic tilt. This will stabilize the lower back and ensure proper form throughout the stretch.
4. Bend the right knee and let your trunk shift towards the right foot (**figure 3**).
5. From this position reach the right arm up overhead and grasp the right wrist with the left hand.
6. Keeping the trunk tall and upright, lean the upper body to the left. As you do this, you should feel the stretch increase in the left thigh, and feel a stretch on the outside of the right trunk and shoulder (**figure 4**).
7. Hold the stretch for 15-30 seconds and repeat on the opposite side.





**Figure 1:** *starting position*



**Figure 2:** *take a wide step to the right*



**Figure 3:** *bend the right knee and shift the body toward the right*



**Figure 4:** *reach the right arm overhead and lean the trunk toward the left*

### **Standing Trunk Rotation**

**Hold Time: 15-30 seconds**

**Repetitions: 1**

**Trunk Position: Does Not Apply**

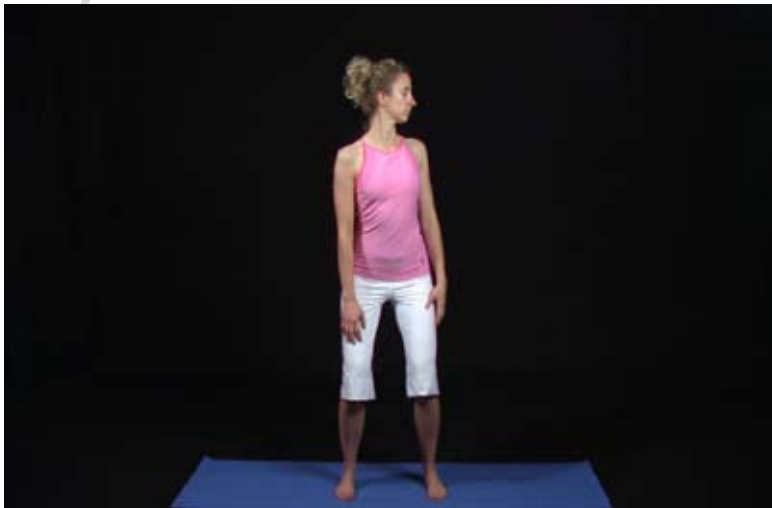
As previously discussed, proper mobility of the trunk and shoulders is essential for a proper swing. It is not only critical how far the trunk and shoulders can rotate, but also how far the trunk and shoulders can rotate relative to the hips. This relative rotation between the shoulders and hips is referred to as the “X” factor which plays a critical role in the force development during the golf swing. To develop a greater “X” factor, it is important to have adequate mobility of the spine, and to be able to separate the movement of the spine and lower body. The Standing Trunk Rotation stretch is designed to build this key movement.

### **To perform the Standing Trunk Rotation stretch:**

1. Begin in a standing position with both knees together and bent approximately 45 degrees (**figure 1**).
2. From this position, rotate the upper body as far as possible to the right as if you were trying to look at something behind. As you do this, do not allow the knees to turn or straighten. It is helpful to squeeze the knees together and concentrate on turning the upper body with the trunk muscles to prevent this from happening (**figure 2**).
3. Keeping the left arm straight, reach the left arm across the body.
4. Place the back of the right hand against the back of the left hand and use the right arm to pull the left arm and trunk further back into rotation - be sure to keep the left arm straight as you do this (**figure 3**).
5. Hold this stretch for 15-30 seconds and then repeat on the opposite side.



**Figure 1:** *Start position*



**Figure 2:** *Without moving your knees turn your upper body to the left*



**Figure 3:** *Reach your right arm across your chest and pull on your right wrist with your left hand*

### **Follow-Thru Stretch**

**Hold Time: 15-30 seconds**

**Repetitions: 1**

**Trunk Position: Does Not Apply**

Balance is a critical aspect of the golf swing. If the body cannot achieve a proper follow through position, the entire swing will be compromised as the body will subconsciously alter its movements to match the final follow through position. This last stretch in the Integrated Flexibility Tract, the Follow-Thru stretch, is specifically designed to improve the body's ability to reach your optimal follow through position.

### **To perform the Follow Through Stretch:**

1. From a standing position with the left foot firmly planted on the mat, turn your hips as far as possible to the left. Be careful to ensure the entire pelvis has turned and not just the spine. As you do this, you should feel a stretch in the left hip (**figure 1**).
2. From this position, reach the right arm up and across the body as if the arm was executing the follow through phase of the swing (**figure 2**).
3. Next, place the back of the left hand against the back of the right wrist. Use the left arm to further pull the right arm up and across the body. It is important that you keep the right arm straight during this movement.
4. As you complete this stretch, the position of your chest should be facing left (in reference to the left foot), and you should feel as if your trunk has coiled around the left planted leg (**figure 3**).
5. Hold this stretch position for 15-30 seconds and then repeat on the opposite side.





**Figure 1:** *Keep your left foot flat on the mat and turn your hips toward to the left*



**Figure 2:** *Reach your right arm up and across your chest*



**Figure 3:** *Pull on the back of your right wrist with your left hand to increase the stretch*



## Performance Flexibility™ for GOLFERS

A complete stretching and flexibility program created specifically for golfers, designed to reduce injury, promote optimal swing technique, and improve distance, power, and performance.

